1. AMENDMENT

1.1 IN THE CLAIMS:

1. (Currently Amended) An isolated polynucleotide that:

~~(a) encodes a polypeptide having *S*-adenosyl-L-methionine:phosphoethanolamine *N*-methyltransferase activity and that comprises an at least 27 contiguous amino acid sequence from SEQ ID NO:2; or~~

~~(b)~~ encodes a polypeptide having *S*-adenosyl-L-methionine:phosphoethanolamine *N*-methyltransferase activity and at least about ~~85~~ 95% sequence identity with the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4.

2.-7. (Canceled)

8. (Previously Presented) An isolated polynucleotide comprising a sequence region that encodes a polypeptide comprising the sequence of SEQ ID NO:2.

9.-11. (Canceled)

12. (Currently Amended) The isolated polynucleotide of claim 1 ~~claim 11~~, comprising a sequence region that encodes a polypeptide having *S*-adenosyl-L-methionine:phosphoethanolamine *N*-methyltransferase activity and at least about 96% sequence identity with the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4.

13. (Currently Amended) The isolated polynucleotide of claim 12, comprising a sequence region that encodes a polypeptide having *S*-adenosyl-L-methionine:phosphoethanolamine *N*-methyltransferase activity and at least about 98% sequence identity with the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4.

14.-38. (Canceled)

39. (Previously Presented) A virus comprising the polynucleotide of claim 1.

40. (Previously Presented) A host cell comprising the polynucleotide of claim 1 or the virus of claim 39.

41. (Previously Presented) The host cell of claim 40, wherein said host cell is a bacterial cell.

42. (Previously Presented) The host cell of claim 41, wherein said host cell is an *Escherichia, Salmonella* or *Agrobacterium* cell.

43.-76. (Canceled)

77. (Currently Amended) The isolated polynucleotide of ~~claim 7~~ claim 1, comprising a sequence region that encodes a polypeptide having an at least 40 contiguous amino acid sequence from SEQ ID NO:2 or SEQ ID NO:4.

78. (Currently Amended) The isolated polynucleotide of claim 77, comprising a sequence region that encodes a polypeptide having an at least 60 contiguous amino acid sequence from SEQ ID NO:2 or SEQ ID NO:4.

79. (Currently Amended) The isolated polynucleotide of claim 78, comprising a sequence region that encodes a polypeptide having an at least 80 contiguous amino acid sequence from SEQ ID NO:2 or SEQ ID NO:4.

80. (Currently Amended) The isolated polynucleotide of claim 79, comprising a sequence region that encodes a polypeptide having an at least 100 contiguous amino acid sequence from SEQ ID NO:2 or SEQ ID NO:4.

81. (Currently Amended) The isolated polynucleotide of claim 80, comprising a sequence region that encodes a polypeptide having an at least 120 contiguous amino acid sequence from SEQ ID NO:2 or SEQ ID NO:4.

82. (Currently Amended) The isolated polynucleotide of claim 81, comprising a sequence region that encodes a polypeptide having an at least 140 contiguous amino acid sequence from SEQ ID NO:2 or SEQ ID NO:4.

83. (Currently Amended) The isolated polynucleotide of claim 82, comprising a sequence region that encodes a polypeptide having an at least 160 contiguous amino acid sequence from SEQ ID NO:2 or SEQ ID NO:4.

84.-97. (Canceled)

98. (Currently Amended) An isolated polynucleotide comprising a sequence region that encodes a polypeptide ~~having~~ comprising the sequence of SEQ ID ~~NO:2~~ NO:4.

99. (New) The isolated polynucleotide of claim 13, comprising a sequence region that encodes a polypeptide having *S*-adenosyl-L-methionine:phosphoethanolamine *N*-methyltransferase activity and at least about 99% sequence identity with the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4.

100. (New) The isolated polynucleotide of claim 99, comprising a sequence region that encodes a polypeptide that comprises the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4.

101. (New) The isolated polynucleotide of claim 1 comprised within a vector.

102. (New) The host cell of claim 40, wherein said host cell is a eukaryotic cell.

103. (New) A composition comprising the polynucleotide of claim 1 or claim 8.

104. (New) A kit comprising, in suitable container means, (a)(i) the polynucleotide of claim 1. (ii) the polynucleotide of claim 8, (iii) the virus of claim 39, or (iv) the host cell of claim 40; and (b) instructions for using said kit.

2. RESPONSE

2.1 STATUS OF THE CLAIMS

Claims 1-13, 39-42, 77-83, 94-95 and 98 were pending at the time of the action.

Claims 2-7, 94-95 are canceled without prejudice and without disclaimer.

Claims 1, 12, 13, 77-83, and 98 have been amended herein.

Claims 99-104 have been added herein.

Claims 1, 8 12-13, 39-42, 77-83, 98, and 99-104 are now pending in the case.

2.2 SUPPORT FOR THE CLAIMS

Complete support for each of the claims as amended herein is provided by the specification and original claims as filed. Applicants certify that no new matter has been introduced as a result of the accompanying amendment.

2.3 EXAMINER INTERVIEW

Applicants appreciate the Interview conducted in the Office on July 14, 2004 with Examiner McElwain, Supervisory Examiner Nelson and Applicants' undersigned representative, Dr. Mark D. Moore, to discuss the pending claims, and to address the issues which remained outstanding in the case.

Applicants appreciate the Examiners' concurrence with the substance of the accompanying amendment to bring claims drawn to particular embodiments of the invention to allowance. Applicants' representative particularly appreciates the helpfulness of the Office to suggest particular claim language that would be allowable in view of the prosecution history and of the detailed and enabling disclosure of the present specification.

Mindful of the Applicants' small entity status, and in efforts to secure an economically-expedient allowance of particular claims, Applicants' representative also appreciates the Examiners' agreement to reconsider the earlier restriction requirement and to permit rejoinder of polynucleotide compositions that encode the polypeptide species exemplified in SEQ ID NO:4 to the present case. Likewise, the agreeability of the Examiners to permit introduction of new claims 99-104 for consideration (effectively rejoining the subject matter of original claims placed in restriction groups III and IV, eukaryotic host cells, and compositions, respectively, that comprise the polynucleotide of claim 1) to further provide cost-effective prosecution on behalf of the small-entity Applicants is noted and appreciated.

2.4 RESPONSE

Applicants maintain their position already of record in previous responses with respect to all rejections advanced against the pending claims.

However, mindful of patent term and in the interest of cost-effective allowance of claims of particular relevance in the present application, Applicants have presented the accompanying amendment to distinctly claim and particularly point out certain aspects of the invention, which Applicants reached agreement with the Office during the Interview discussed above to be free of rejection under any section of the statutes. As always, Applicants expressly reserve the right to file a continuing application to prosecute claims of scope equal to that of the claims as originally filed in the present application.

2.5. THE REJECTIONS UNDER 35 U. S. C. § 112, 1ST PARAGRAPH, ARE OVERCOME

Claims 1-7, 9-13, 39-42, 77-83, 94 and 95 were rejected under 35 U. S. C. §112, 1st paragraph, allegedly for failing to comply with the written description requirement. The claims allegedly contain subject matter which was not described in the specification in such as way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Applicants respectfully traverse this rejection. With respect to claims 2-7 and 94-95, the rejection is moot as the claims are no longer present in the case. With respect to the remaining claims, Applicants are of the position that the specification is fully enabling and meets the written description requirement for an isolated polynucleotide that "encodes a polypeptide having *S*-adenosyl-L-methionine:phosphoethanolamine *N*-methyltransferase activity and at least about 95% sequence identity with the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4," which is the enzymatically-active N-terminal fragment of SEQ ID NO:2. Applicants further take the position that compositions, kits, virus and host cells comprising such a polynucleotide also are fully supported by the specification and are free from rejection under the statutes.

Following discussions with the Examiners in charge of this case as noted in the Interview Summary above, Applicants believe they have fully overcome this rejection with the present claims, and as such, respectfully request that the rejection be withdrawn, and that the claims proceed to allowance with all due course.

2.6 THE REJECTIONS UNDER 35 U. S. C. § 112, 1ST PARAGRAPH, ARE OVERCOME

Claims 1-7, 9-13, 39-42, 77-83, 94 and 95 were rejected under 35 U. S. C. §112, 1st paragraph, allegedly because the specification does not enable any person skilled in the art to

which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

Applicants also respectfully traverse this rejection. With respect to claims 2-7 and 94-95, the rejection is moot as the claims are no longer present in the case. With respect to the remaining claims, as noted above, Applicants maintain their position that the specification is fully enabling and meets the written description requirement for an isolated polynucleotide that "encodes a polypeptide having *S*-adenosyl-L-methionine:phosphoethanolamine *N*-methyltransferase activity and at least about 95% sequence identity with the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4," which is the enzymatically-active N-terminal fragment of SEQ ID NO:2. Applicants further take the position that compositions, kits, virus and host cells comprising such polynucleotides also are fully supported by the specification and are free from rejection under the statutes.

Following discussions with Examiner McElwain and Examiner Nelson during the Interview conducted in the office on July 14, 2004, Applicants believe they have now also fully overcome this rejection with the present claims, and as such, respectfully request that the rejection be withdrawn, and that the claims proceed to allowance with all due course.

2.7 CONCLUSION

Applicants believe this to be a full, timely and complete response to the outstanding Action, and further believe that all pending claims are free of any rejection under the statutes, and that the claims are now placed in condition for allowance through the entry of the accompanying amendment and consideration of the foregoing remarks.

Applicants expressly reserve the right to re-file claims directed to the remaining embodiments of the invention in subsequent continuing applications. Should the Examiner have any questions concerning the accompanying amendment, response and related papers, a telephone call to the undersigned Applicants' representative is earnestly solicited.

Respectfully submitted,

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Date: July 30, 2004

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